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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,628	03/15/2004	Manabu Sasaki	520.43638X00	8414
20457 7590 06/05/2009 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER				
SHEN, KEZHEN				
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06/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/799,628

**Applicant(s)**

SASAKI, MANABU

**Examiner**

Kezhen Shen

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 7-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse JP411016269A further in view of Uehigashi JP2002230795A and Kikuchi JP01-255920.

Regarding claim 7, Naruse teaches an optical disk drive apparatus, for reading-out information from an optical disk (Abstract and Fig. 1), having a plural number of information recording layers made up in a direction of rotation axis thereof (Abstract 1<sup>st</sup> and 2<sup>nd</sup> recording layers of the optical disk), through irradiating a light beam upon the information recording layer, and for transferring the information read out to a host-computer, responding to a transfer request from the host-computer (Abstract the data requested to read for the 1<sup>st</sup> layer are read out on the storage area of the buffer memory and transferred to a data processing part), comprising: a memory configured to memorize the information read out from the information recording layers of the optical

disk (Abstract the data requested to read for the 1<sup>st</sup> layer are read out on the storage area of the buffer memory and transferred to a data processing part), the memory having a plural number of buffer areas including a first buffer area and an other buffer area (Abstract cache buffer memories, 14 and 15 of Fig. 1); and a processor configured to control the memory (Abstract controller, Fig. 1); and the processor effects control so as to memorize following information which follows information, upon which the transfer request is made from the host-computer (Abstract data on the 1<sup>st</sup> and 2<sup>nd</sup> recording layer). Naruse fails to teach wherein the plural number of information recording layers of the optical disk is larger than the plural number of buffer areas of the memory and the processor effects control so as (a) to retrieve access frequency of transfer requests for each of the plural number of recording layers, (b) to memorize following information which follows information into the first buffer area when the access frequency of transfer requests of one of the plural number of recording layers is highest among the plural number of recording layers, and (c) to memorize the following information into the other buffer area when the access frequency of the transfer requests of another of the plural number of recording layers is not the highest.

However Uehigashi teaches the transfer request made in dependence upon a frequency of the accesses for reading out information obtained through the supervision thereof and the place this information in the leading address (Abstract reading of arbitrary data to the leading address having the highest access frequency, and is made to stand by based on the leading address). Therefore, one of ordinary skill in the art is motivated to modify the processor and dual recording layer as taught by Naruse and the

reading of data based on access frequency as taught by Uehigashi together to create a system of storing and reading out information based on the access frequency for the benefit of reducing the seek time of the optical pickup (Abstract to reduce a seek operation time of an optical pickup). Naruse and Uehigashi both fail to teach the plural number of information recording layers of the optical disk is larger than the plural number of buffer areas of the memory and to memorize following information into other buffer area when the access frequency of the transfer requests of another of the plural number of recording layers is not the highest.

However, Kikuchi teaches a system of high speed access by determining a frequency of data transfer requests and transferring information to an information memory area or the external memory depending on access frequency (Abstract). Therefore, one of ordinary skill in the art is motivated to modify the processor and dual recording layer as taught by Naruse and Uehigashi and the transfer of information from one memory to another based on access frequency as taught by Kikuchi together as a whole to include a system of transferring information to a first memory based on the highest access frequency for the benefit of high speed access by automatically centralizing and storing data with a high access frequency to an information memory area (Kikuchi Abstract).

Naruse, Uehigashi and Watanabe et al. discloses the claimed invention except for the plural number of information recording layers of the optical disk is larger than the plural number of buffer areas of the memory.

It would have been an obvious matter of design choice to use a buffer less than the plural number of information recording layers of the optical disk, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 9, the limitations have been analyzed and rejected with respect to the reasons set forth above in claim 7.

3. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse JP411016269A, Uehigashi JP2002230795A and Kikuchi JP01-255920 and further in view of Watanabe et al. US 2002/0181356 A1.

Regarding claim 8, Naruse fails to teach the optical disk drive apparatus according to claim 7, wherein the processor enables changing a size of each of the plural number of buffer areas in dependence upon the access frequency of the transfer requests.

However, Watanabe et al. teach a memory which is variable in size dependent on the frequency of errors occurring on the optical disc ([0033] [108]-[109]). Therefore, one of ordinary skill in the art is motivated to modify the system of storing and reading out information based on the access frequency as taught by Naruse and the teachings of variable size memory as taught by Watanabe together to create a system of storing and reading out information based on the access frequency and for changing the size of the memory depending on the access of frequency for the benefit of efficiently utilizing the memory ([0114]).

Regarding claim 10, the limitations have been analyzed and rejected with respect to the reasons set forth above in claim 8.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kezhen Shen whose telephone number is (571) 270-1815. The examiner can normally be reached on **Monday-Friday 10am-6pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kezhen Shen/  
Examiner, Art Unit 2627

/Joseph H. Feild/  
Supervisory Patent Examiner, Art  
Unit 2627